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| APPLICATION NO.                                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/700,210                                      | 11/03/2003  | John Ellenby         | 215.48              | 4176             |
| 7590  | 03/23/2006  |                      | EXAMINER            |                  |
| Joseph Page<br>PO Box 757<br>La Jolla, CA 92038 |             |                      | NGUYEN, PHU K       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2628                |                  |
| DATE MAILED: 03/23/2006                         |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|------------------------------|------------------------|---------------------|--|
|                              | 10/700,210             | ELLENBY ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Phu K. Nguyen          | 2673                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 04 November 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-8 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Thi Nguyen*  
PHU K. NGUYEN  
MARY EXAMINER  
GROUP 2300

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/4/03.

4)  Interview Summary (PTO-413) GROUP 230  
Paper No(s)/Mail Date. \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 4-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,535,210.

Although the conflicting claims are not identical, they are not patentably distinct from each other because :

| Claim 4 of the pending application  | Claim 1 of the US 6,535,210   |
|---|---|
| Computer modeling apparatus comprised of:   | A computer vision system modeling apparatus comprised of:   |
| a computer processor in communication with an electronic camera, position, attitude and range determining means; and a video display, | a) an electronic camera in communication with; b) a computer in communication with each of the following: c) a position determining means; d) an attitude |

|   |   |
|---|---|
|   | <p>determining means; e) a range determining means; and f) a display,</p>   |
| <p>said electronic camera having an imaging axis and an image plane, the imaging axis defining a system pointing direction, the intersection of the imaging axis and image plane defining a position reference point; said computer arranged to run CAD software in conjunction with software arranged to communicate with said position, attitude and range determining means and further with said video display;</p>           | <p>said electronic camera having an imaging axis and an image plane, the imaging axis defining a system pointing direction, the intersection of the imaging axis and image plane defining a position reference point; said computer arranged to run CAD software in conjunction with software to communicate with said position, attitude and range determining means and said display;</p>   |
| <p>said position determining means arranged to determine the position of the reference point, said attitude determining means arranged to determine the system pointing direction, said range determining means arranged to determine the distance from the position reference point to a point on an object in a scene being addressed, and said display having a substantially planar image field with its normal direction</p> | <p>said position determining means arranged to determine the position of the position reference point, said attitude determining means arranged to determine the system pointing direction, said range determining means arranged to determine the distance from the camera to an object in a scene being addressed, said display having a substantially planar image field, the normal direction of the image field being aligned to</p> |

|                                    |                         |
|------------------------------------|-------------------------|
| aligned to the pointing direction. | the pointing direction. |
|------------------------------------|-------------------------|

It is clearly that all the components and their arrangements are almost identical with no significant difference. Therefore, claim 4 of the present application is not patentable under double patenting rejection.

| Claim 5 of the present application   | Claim 2 of the US patent 6,535,210  |
|--|---|
| A computer apparatus of claim 4, said computer including a software object model responsive to position, attitude and <u>range</u> of the apparatus. | A computer vision system apparatus of claim 1, said computer being comprised of a computer model which is responsive to the position and attitude determining means of the apparatus. |

Although in claim 2 of the US application, the computer model is not responded to "range" of the apparatus, but claim 2 depends on claim 1, in which a computer model is "arranged to run CAD software in conjunction with software to communicate with said position, attitude and range determining means and said display" having the same feature of claims 4 and 5 of the present application. Therefore, claim 5 of the present application is not patentable under double patenting rejection.

| Claim 6 of the present application                                    | Claim 3 of the US patent 6,535,210   |
|---|--|
| A computer apparatus of claim 5, said response being a translation of | A computer vision system apparatus of claim 2, said response being a translation |

|   |  |
|---|--|
| <p>perspective and <u>size</u> whereby the perspective of the scene being addressed from the camera viewpoint corresponds to the perspective and size of the displayed model.</p> | <p>of perspective to agree with the true perspective of the scene being addressed from the camera viewpoint.</p> |
|---|--|

Although in claim 3 of the US application does not mention a translation of size, but claim 3 is dependent on claim 1, in which the perspective translation depends on the range data, therefore, the translation in perspective also related to a translation in size and thus having the same feature of claim 6 of the present application. Therefore, claim 6 of the present application is not patentable under double patenting rejection.

Claims 1-3 and 7-8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, and 9-13 of U.S. Patent No. 6,690,370. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

|  |   |
|--|---|
| Claim 1 of the present application   | Claim 1 of the US 6,690,370   |
| Apparatus for creating digital computer models comprising:                                       | Apparatus for creating computer models comprising:                            |
| <u>at least one</u> electronic camera; position and attitude measurement means; a video display; | an electronic camera; position and attitude measurement apparatus; a display; |

|  |   |
|--|---|
| and a computer processor operable for: running CAD software, acquiring images from said electronic camera, receiving position and attitude information, computing perspective adjustments, | and a computer operable for: running CAD software, acquiring images from said electronic camera, receiving position and attitude information relating to a present system position and attitude of said electronic camera, computing perspective adjustments, |
| combining imagery from said electronic camera with imagery from said CAD software, displaying combined imagery at said display;  | combining imagery from said electronic camera with imagery from said CAD software, displaying combined imagery at said display;   |
| said electronic camera, position and attitude measurement means each in <u>electronic</u> communication with said computer.  | said electronic camera, position and attitude measurement apparatus each in communication with said computer.   |

The difference in which "at least" one electronic camera in the present application is obvious in view of "an electronic camera" of claim 1 of the US patent. Therefore, claim 1 of the present application is not patentable under double patenting rejection.

| Claim 2 of the present application                                       | Claim 2 of the US 6,690,370  |
|--|--|
| Apparatus of claim 1 further comprising: a range measurement means, said | Apparatus of claim 1 further comprising: a range measurement apparatus, said |

|   |  |
|---|--|
| computer further being operable for receiving range information relating to the distance between the apparatus and a point or position in the scene being addressed, said range measurement means is in communication with said computer. | computer further being operable for receiving range information relating to the distance between the apparatus and a point in the scene being addressed, said range measurement apparatus being in communication with said computer. |
|---|--|

The two dependent claims are identical. Therefore, claim 2 of the present application is not patentable under double patenting rejection.

| Claim 3 of the present application  | Claim 3 of the US 6,690,370   |
|---|---|
| Apparatus of claim 1, said displaying combined imagery includes forming a composite image of a real scene with a computer model graphic image superimposed thereon in <u>a perspective</u> <u>which corresponds to the perspective of the scene as viewed from a user's position.</u> | Apparatus of claim 1, said displaying combined imagery includes forming a composite image of the real scene with a computer model graphic superimposed thereon in <u>proper perspective</u> . |

In claim 3 of the US patent, the "real" perspective" is correspondent to the "perspective which corresponds to the perspective of the scene as viewed from a user's position" of claim 3 of the present application. Therefore, claim 3 of the present application is not patentable under double patenting rejection.

| Claim 7 of the present application   | Claim 9 of the US 6,690,370   |
|--|---|
| Computer modeling methods comprising the steps:  | Computer modeling methods comprising the steps:   |
| addressing a scene with an electronic camera;  | viewing a scene with an electronic camera;  |
| measuring position and attitude of said camera;  | measuring position and attitude of said camera;   |
| recording a first point associated with said measurements;   | recording a first point associated with said measurements;                                  |
| changing either the position state or attitude state of the camera;                                  | changing either the position state or attitude state of the camera;                         |
| recording at least one other point associated with the new position and attitude state;              | recording at least one other point associated with the new position and attitude state;     |
| and displaying said points recorded superimposed with an image captured with said electronic camera. | and displaying said points superimposed with an image captured with said electronic camera. |

It is clear these two claims are essentially identical. Therefore, claim 7 of the present application is not patentable under double patenting rejection.

| Claim 8 of the present application  | Claim 13 of the US 6,690,370   |
|---|--|
| Computer modeling methods of claim 7, further comprising a step to re-acquire a previously defined point or model from a new position to improve the accuracy by averaging. | Computer modeling methods of claim 9, further comprising a step to re-acquire a previously defined from a new position to improve the accuracy by averaging. |

It is clear these two claims are essentially identical. Therefore, claim 8 of the present application is not patentable under double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, bipin Shalwala can be reached on (571) 272 7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen  
March 16, 2006

*Phu Nguyen*  
PHU K. NGUYEN  
PRIMARY EXAMINER  
GROUP 2300